



Docket No. 10891/AGS/IBSS/LP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Samantha Tan and Ning Chen
Patent No: 7,091,132 B2
Application No.: 10/627,416
Filed: July 24, 2003
For: ULTRASONIC ASSISTED ETCH USING CORROSIVE LIQUIDS
Examiner: Hieu T. Vo.
Group No.: 3747
Customer No.: 31647

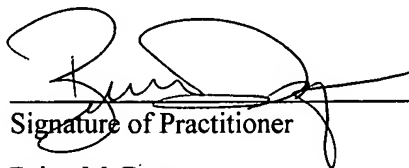
BOX DAC
Office of Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PETITION UNDER 1.183 WITH FEE AND CERTIFICATE OF CORRECTION WITH FEE
TO CORRECT ERRONEOUS ASSIGNEE NAME AND ADDRESS FROM PATENT**

1. This petition and the attached certificate of correction is to request the correction of assignee information from Applied Materials, Inc. to Chemtrace Precision Cleaning, Inc.
2. Correct Assignee name and address:
Chemtrace Precision Cleaning, Inc.
Fremont, California 94538
3. Reel and frame number where the assignment was recorded before the issuance of this patent (37 CFR 3.11) is: Reel/Frame 015283/0261
4. Fee Payment (37 C.F.R. section 1.17(i) and 37 C.F.R. 1.20(a))
The fee required by 37 C.F.R. section 1.17(i) and 37 C.F.R. is paid as follows:
Charge Account No. 04-1696 for the Petition fee of \$ 130.00
Charge Account No. 04-1696 for the Certificate of Correction fee of \$ 100.00
Charge Account No. 04-1696 for any fee deficiency.

Date: 10/17/06

Reg. No.: 41,720
Tel. No.: 914-332-9081


Signature of Practitioner

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10/20/2006 CNGUYEN 00000005 041696 7091132

01 FC:1464 130.00 DA
02 FC:1811 100.00 DA

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,091,132 B2

APPLICATION NO.: 10/627,416

ISSUE DATE : August 15, 2006

INVENTOR(S) : Samantha Tan and Ning Chen

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page,

Item [73], Assignee, should read --Chemtrace Precision Cleaning, Inc., Fremont, CA (US)--.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



(12) **United States Patent**
Tan et al.

(10) **Patent No.:** US 7,091,132 B2
(45) **Date of Patent:** Aug. 15, 2006

(54) **ULTRASONIC ASSISTED ETCH USING
CORROSIVE LIQUIDS**

(75) **Inventors:** Samantha Tan, Union City, CA (US);
Ning Chen, Fremont, CA (US)

(73) **Assignee:** Applied Materials, Inc., Santa Clara,
CA (US)

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 122 days.

(21) **Appl. No.:** 10/627,416

(22) **Filed:** Jul. 24, 2003

(65) **Prior Publication Data**

US 2005/0016959 A1 Jan. 27, 2005

(51) **Int. Cl.**
H01L 21/302 (2006.01)

(52) **U.S. Cl.** 438/745; 438/750; 156/345.11;
216/91

(58) **Field of Classification Search** 438/745,
438/750, 751, 753; 156/345.11, 345.18;
216/56, 91, 103, 108, 90

See application file for complete search history.

(56) **References Cited**

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Primary Examiner—Lan Vinh

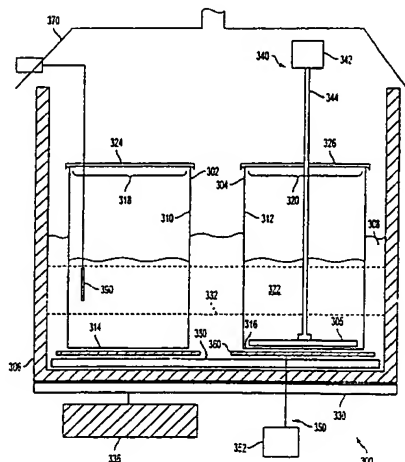
(74) *Attorney, Agent, or Firm*—Dugan & Dugan LLP

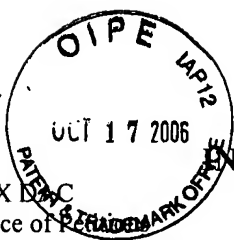
(57)

ABSTRACT

An ultrasonic etching apparatus for chemically-etching a workpiece is disclosed. The apparatus includes an outer tank at least partially filled with an aqueous solution, an inner tank at least partially disposed within the outer tank and in contact with aqueous solution, the inner tank at least partially filled with an etching solution, a lid engaged with the mouth of said inner tank; and an ultrasonic transducer coupled to the outer tank to impart ultrasonic energy to the etching solution in said inner tank. Also disclosed are methods of using the apparatus to etch workpieces.

33 Claims, 10 Drawing Sheets





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THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Re: Inventor(s): Samantha Tan and Ning Chen
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Group Art Unit: 3747

Transmitted herewith is:

- ☒ Petition Under 1.183 with Fee and Certificate of Correction with Fee to Correct Erroneous Assignee Name and Address From Patent
- ☒ Certificate of Correction form
- ☒ Copy of 1st page of U.S. Patent No. 7,091,132 B2
- ☒ Return Postcard

FEE CALCULATION					
Fee Items	Claims Filed	Included With Basic Fee	Extra Claims	Fee Rate	Total
Total Claims	N/A	- 20 =	-0-	X \$50.00	\$0.00
Independent Claims	N/A	- 3 =	-0-	X \$200.00	\$0.00
Basic Filing Fee (\$300.00), Utility Search Fee (\$500.00), Utility Examination Fee (\$200.00)				\$1000.00	\$0.00
TOTAL FEES					\$0.00

— The Commissioner is hereby authorized to charge \$0.00 to Deposit Account No. 04-1696.

— The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 04-1696. A duplicate copy of this transmittal is enclosed.

☒ Please address all future correspondence to:

Customer # 31647
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Signature: [Signature]

Respectfully submitted,

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